



PATENT ABSTRACTS OF JAPAN

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B05B 17/06(21) Application number: **05287735**(71) Applicant: **TODA KOJI**(22) Date of filing: **22.10.93**(72) Inventor: **TODA KOJI****(54) ULTRASONIC FILM FORMING DEVICE****(57) Abstract:**

PURPOSE: To provide an ultrasonic film forming device in which a film consisting of a material contained in mist is formed on a substrate by atomizing a solution with elastic vibration generated by an ultrasonic vibrator and spraying the mist to the substrate.

CONSTITUTION: When a combined body consisting of a piezoelectric oscillator 1 and a diaphragm is driven 2 by using a self-exciting driving circuit, the piezoelectric oscillator 1 is vibrated to propagate the vibration to the diaphragm 2. A solution fed to the back surface of the diaphragm 2 in contact with a liquid holding material 4 is atomized through holes made in the diaphragm 2 with the vibration of the diaphragm 2. The mist is sprayed to a substrate to form a thin film consisting of components in the solution. In this way, the film thickness and the orientation of the thin film are controlled and the device is made to be of simple construction and small-sized and lightweight and is driven at low power consumption.

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